

HOW YOUR BRAIN UNDERSTANDS WHAT YOUR EAR HEARS

Maryland Voluntary State Curriculum – Science – Grades 6 - 8

Lesson	Standard	Description
2, 3	1.A.1	Design and carry out simple investigations and formulate appropriate conclusions based on data obtained.
2	1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.
All lessons	1.A.1.b	Develop the ability to clarify questions and direct them toward objects and phenomena that can be described, explained, or predicted by scientific investigations.
3, 4	1.A.1.c	Explain and provide examples that hypotheses are valuable, even if they turn out not to be true, if they lead to fruitful investigations.
1, 3, 4, 5	1.A.1.d	Locate information in reference books, back issues of newspapers, magazines and compact disks, and computer databases.
3	1.A.1.e	Explain that if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one of the variables.
3, 5	1.A.1.h	Use mathematics to interpret and communicate data. Determine what units to use, express findings in several forms, decide what degree of precision is adequate, and estimate probabilities of outcomes.
3	1.A.1.i	Use ratios and proportions in appropriate problems.
3	1.B.1	Review data from a simple experiment, summarize the data, and construct a logical argument about the cause-and-effect relationships in the experiment.
2, 3, 5	1.C.1.a	Organize information in simple tables and graphs and identify relationships they reveal.
1, 2, 3, 5	1.C.1.b	Read simple tables and graphs produced by others and describe in words what they show.
5	1.C.1.c	Give examples of how scientific knowledge is subject to modification as new information challenges prevailing theories and as a new theory leads to looking at old observations in a new way.
All lessons	1.C.1.f	Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification or elaboration, and expressing alternative positions.
1	1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
4	3.B.1.b	Based on data from microscopic studies, readings and designed investigations, cite evidence illustrating that the cell- tissue-organ systems of multicellular organisms (plant and animal) carry out the life functions of those organisms: extracting energy from food, getting rid of wastes, and making new materials. (Grade 7)

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4, 5	3.B.2.b	Select several body systems and explain the role of cells, tissues and organs in the systems selected that effectively carry out a vital function for the organism, such as obtaining and providing energy, defense, reproduction, and coordination of body functions. (Grade 7)
1, 4	3.D.1.b	Recognize that adaptations may include variations in structures, behaviors, or physiology, such as spiny leaves on a cactus, birdcalls, and antibiotic resistant bacteria. (Grade 8)
1, 4	3.D.1.c	Recognize and describe that adaptation involves the selection of natural variations in a population. (Grade 8)
4	5.B.2.a	Identify and describe the various forms of energy that are transformed in order for systems (living and non-living) to operate. (Flashlight, pulleys, solar calculator, plant cells.) (Grade 8)
3	5.D.2.b	Identify and describe the relationship among frequency, wavelength, and pitch. (Grade 6)
1, 3	5.D.2.c	Observe and describe the relationship between amplitude and loudness. (Grade 6)
4	5.D.2.d	Cite evidence that sound waves transfer energy using observation of sympathetic tuning forks, tuned guitar strings, etc. (Grade 6)
5	6.B.1.a	Identify and describe a range of local issues that have an impact on people in other places. (Grade 6)
5	6.B.1.a	Identify and describe a local, regional, or global environmental issue. (Grade 7)
Maryland Voluntary State Curriculum – Mathematics – Grades 6 - 8		
Lesson	Standard	Description
3, 5	1.B.2.e	Apply given formulas to a problem-solving situation.
3, 5	1.C.2.a	Identify and describe the change represented in a table of values. (Grades 6 & 7)
3	3.B.1.a	Select and use appropriate tools and units. (Grade 6)
2, 3, 5	4.A.1	Organize and display data.
3, 5	6.A.1.a	Read, write, and represent whole numbers.
3, 5	6.C.1.a	Add, subtract, multiply, and divide integers.
3	6.C.3	Analyze ratios, proportions, or percents.
3, 5	7.C.1.a	Use multiple representations to express concepts or solutions.
3, 5	7.C.1.b	Express mathematical ideas orally.
3, 5	7.C.1.c	Explain mathematically ideas in written form.

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3, 4, 5	7.C.1.e	Express solutions using pictorial, tabular, graphical, or algebraic methods.
3, 5	7.C.1.f	Explain solutions in written form.
3, 5	7.C.1.g	Ask questions about mathematical ideas or problems.
3, 5	7.C.1.h	Give or use feedback to revise mathematical thinking.
3, 5	7.D.1.b	Identify mathematical concepts in relationship to other disciplines.
3, 5	7.D.1.c	Identify mathematical concepts in relationship to life.
Maryland Voluntary State Curriculum – Reading/English Language Arts – Grades 6 - 8		
Lesson	Standard	Description
1, 3, 4, 5	1.D.1.a	Acquire new vocabulary through listening to, independently reading, and discussing a variety of literary and informational texts.
1, 3, 4, 5	1.D.1.b	Discuss words and word meanings daily as they are encountered in texts, instruction, and conversation.
1, 3, 4, 5	1.D.3.d	Use new vocabulary in speaking and writing to gain and extend content knowledge and clarify expression.
1, 3, 4, 5	1.E.3.a	Select and apply appropriate strategies to make meaning from text during reading
1, 3, 4, 5	1.E.4.b	Identify and explain information directly stated in the text.
1, 3, 4, 5	1.E.4.c	Draw inferences and/or conclusions and make generalizations.
1, 3, 4, 5	1.E.4.e	Summarize or paraphrase.
1, 3, 4, 5	1.E.4.f	Connect the text to prior knowledge or personal experience.
3, 4, 5	4.A.1.a	Use a variety of self-selected prewriting strategies to generate, select, narrow, and develop ideas.
3, 4, 5	4.A.1.b	Select, organize, and develop ideas appropriate to topic, audience, and purpose.
3, 4, 5	4.A.2.c	Compose to inform using relevant support and a variety of appropriate organizational structures and signal words within and between paragraphs.
5	4.A.2.d	Compose to persuade by supporting, modifying, or disagreeing with a position, using effective rhetorical strategies.
All lessons	4.A.4.a	Use precise word choice, formal to informal, based on audience, situation, or purpose.
3, 4, 5	4.A.7.a	Identify, evaluate, and use sources of information on a self-selected and/or given topic.
All lessons	4.A.7.b	Use various information retrieval sources (traditional and/or electronic) to obtain information on a self-selected and/or given topic.

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All lessons	6.A.1.a	Attend to the speaker. (Grade 6)
All lessons	6.A.1.b	Ask appropriate questions. (Grade 6)
All lessons	6.A.1.c	Contribute relevant comments. (Grade 6)
All lessons	6.A.1.d	Relate prior knowledge. (Grade 6)
All lessons	6.A.1.e	Use note taking to assist listening when appropriate. (Grade 6)
All lessons	6.A.1.f	Maintain visual contact with the speaker. (Grade 6)
All lessons	6.A.1.g	Maintain focus by identifying and managing barriers to listening. (Grade 6)
5	7.A.1	Demonstrate appropriate organizational strategies and delivery techniques to plan for a variety of oral presentation purposes.
Maryland Voluntary State Curriculum – Health – Grades 6 - 8		
Lesson	Standard	Description
All lessons	1.A.1	Recognize and apply effective communication skills.
2	1.A.2	Describe how emotions influence behavior.
5	1.A.3	Identify components to promote personal well-being.
5	1.A.3.a	Review components of personal well-being. (Grade 8)
5	1.A.3.b	Explain the importance of assuming responsibilities of personal health behavior. (Grade 8)
5	1.A.3.d	Develop a plan that addresses personal strengths, needs, and health risks. (Grade 8)
5	1.A.4.a	Predict how decisions regarding behavior have consequences for self and others. (Grade 6)
5	1.A.4.b	Analyze how decisions are influenced by external conditions including culture and the media. (Grade 6)
5	3.A.2	Demonstrate the ability to identify and practice health-enhancing behaviors and reduce health risks to live safer, healthier lives. (Grades 6 & 8)
3, 5	7.A.5.a	Identify risk factors that impact on non-communicable diseases: family history, lifestyle choices, and the environment. (Grade 8)
3, 5	7.A.5.c	Identify the protective factors that decrease the occurrence of non-communicable diseases: regular medical check-ups, immunizations and screening, diet and weight management, exercise and rest, and environmental exposure. (Grade 8)